

Assessing the Financial Potential of an Agroforestry-Based Farming Practice in a Labor Scarce Subsistence Economy

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Abstract : Agroforestry is long practiced in Nepal as a means of subsistence livelihoods. Given its potential to climate change mitigation, this practice is being recommended as a climate-smart farming practice in the recent years. However, the financial attractiveness of this practice is not well-documented in a labor scarce economy such as Nepal. This study attempts to examine the financial suitability of an agroforestry-based farming practice in the present socio-economic context of Nepal where labor is in short supply. A total of 200 households were randomly selected for household surveys in Dhanusha district during April to July 2015. Two farming practices were found to be dominant in the study area: 1) conventional farming (field crops only) in which at least two field crops are annually grown, and 2) agroforestry-based farming (agroforest, home garden and field crops combined) practice (ABFP). The ABFP was found to be less labor intensive than the conventional farming (137 Man days/yr/ha vs 218 Man days/yr/ha). The ex-ante financial analysis indicated that both the farming practices generated positive NPVs (Net Present Values) and B/C (Benefit-Cost) ratios greater than one, indicating both are financially attractive farming enterprises under the base discount rate of 12%. However, the ABFP generated higher NPV and greater B/C ratio than the conventional farming, indicating the former was financially more attractive than the later. The sensitivity analysis showed that the conventional farming was more sensitive to change in labor wage rate than that of the ABFP. Up to the 24% discount rate, the ABFP generated higher NPV and in case of B/C ratio, the ratio was found greater for ABFP even in 50% discount rate.

Keywords : agroforestry, benefit-cost analysis, conventional farming, net present value

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